

I

Mawson

1961

D. Trail
Bureau of Mineral Resources,
Canberra.

Mawson, 1961.

Notebook I

Framnes M+S.

February 1961

Flight Masson Area -
Framnes MH - Coast.

Fischer Nunatak has
Depot at break in West Ridge
Henderson & Fischer
Nunataks apparently all characteristic
granite. Henderson v. uniform.

N. end of Masson Range
"Painted PK" is metasediments.
to Mt. Word appears to be
granite.

Henderson & Masson Ra. best
approached from west side.

~~1000~~ ~~Nunatak~~ PK of
✓ Mt. Burnett is metasediment
✓ ? Dallice PK

Dorid Ra. also appears
mainly Granite.

No apparent difference in
Dorid Ra N. of Henderson.

S end Nunataks of (any) Ra
may be different, jacking drift,
fine.

Best approach to all

Rays is from Northern end

Main IV. bulk of core is
probably granite. Some irreg.
veining? pegmatite

Semi Regular in central part of Ra.

Gneisses at Falla Bluff
are red, chonocklets of

Fromes are brown. Gneisses
have finer, less slabby, jointing.

~~Is no~~ Even so Falla
Bluff & off-lying Is! are
apparently uniform rocks.

Ufs I. may be granite,
w. boundary in Howard Bay,
(see (rohn).

Good exposures extend beyond
Taylor Glacier to

Oom I. & Scoble Glacier.

C. Bruce & Oom Bay have
dark well rounded exposures
at coast line, Hays Pk.
is red gneiss, & red gneiss!
~~prob. extends~~ w. to Oom I.

Oom Bay mainland has good
outcrop of lt. brown-red
v. finely jointed rocks

w. some poss. banding or
~~stone~~ stripes trend N.W.

Good banding or coarse
veining in C. Bruce & Oom
Bay. Str. N.N.W., dip
Vertical to 40° N.E.

Lt Rocks extend west from
W. edge of Colbeck Archipelago
Concordance in summit of
Is suggests possibility of
Raised Beachs ashore.

W. I. v. probably granite
w. boundary in Howard Bay
Nora I. off Falla Bluff
may also be lt. red gneiss. co

Nova I. & possibly Falla Bluff
may be farther east gneisses
on coast., the

Stanton Gp. may be other
kind of gneiss rather than granite
Poss. N.N.W. hardly dark
bouds or dark shear zones in
Stanton Gp. Dip W. abt 60°.

Coarse Banded or veined rocks
on mainland at Oldham
I.

Tongue Rock again
is lt. red & white, possibly
banded gneisses, not
granitic jointing.

Are outcrops in small islands
& on mainland between
Tongue Rock & Forbes Glacier.

Large outcrop at W. side of
glacier & within it.

Lt. coloured, lt red finely jointed
rocks at W side Forbes Glacier
again, may be weathering?
- but appear banded. Rocks
str. abt N.W. dip 50° W.
at W side of Forbes Gl

Gibbney Is has bird
colony discolouring rock
which is massive & dark brown.

Outcrop at E side Forbes Glacier
also.

Rocky Is have large patches
lt red & lt. red brown on
dark rocks which are ~~to~~
discoloration caused by
large bird colonies.

Grus pseudo banding
when in joint-valleys.

? Areas of lt. red rocks on
west side of David Ra.

Good route to Plateau
from Ring Rock, accessible
as sea-ice in winter.

Uniform dk. brown rocks at
Ring Rock & islets to E. East.

24/2/61.

Henderson Depot —
Repat '54,

— "at the southern end
of Mr. Henderson"

Stinson '54 — "

— "near the south west end
of the Henderson Ra."

Crohn, 3/56.

— "low rock outcrop
to the south-east of the depot".

Crohn, 9/56

"headed past the
Henderson Depot to the south-
eastern tip of the outcrop on
which the depot is situated."



~~Wed~~ Thu. 3 March 1961.

8053 V, Run 304.

Conil, E. side Dined Ru,
towards N. end.

Pt. 1 Coarse grained
= charnockitic granite.

10 mm feldsp. phenos abnd.
in a mass of qtz., feldsp.
hypsthene. Feldspar &
hypsthene tend to form clumps
the rest of min. exclusive.

No foliation. Feldsp. $\rightarrow$ 50 mm.
qz. str. 160° d. 60° N.E.

— On Peak N. of Saddle
at Pt. 1 qtz. & W. ridge is
strongly banded, possibly sheared
str. 75° dip 85° S, Magnetic

On rare to also broad
col or light grayish red
very coarse grained charnockitic
granite w. vague foliation, poss.
orientation of feldspar xtl.

Also a li inclusion of f.g.
to m.g. & feldspar pyroxene
quartz, finely banded, surrounded

by massive granite.

are also thin $< \frac{1}{2}$ "

black v.f.g. to glassy

veins which may be

quartz. Dominant rock

is chlorokitic granite as above

at vague foltn. str. along

David Rn. (7500 ft), identical.

- Sample ~~R11373~~ R 11419 (p. 5)

Saturday 31st March, 1950

Low PK. S of Henderson Camp

has thick aligned

lt. green-grey lenses or bands

app. in granite.

S. end Henderson appears

all granite, also Fischer

Monah.

Behind 7050 L, Run 306

Pt. 2

Lt. green grey veins

lenses $\approx$ 50' thick mainly
run parallel to mountain, also
horizontal, dip W'wards.

Moderately smooth surface between
Camp & Pt. 2, with deep
wind's cor w cornice start
behind Pt. 2, isolates mountain

Base. lenses & veins
along E. side mostly
strike 65° M. dip abt
 70° ~~W.~~ N.W. Some are possibly

intrusive having veins
appear to be surrounded by
reaction rims, may be
concordant with lith. Mainly

lt. green-grey, some are
mid red-brown, some to granite

Wind's cor smooth snow. If wind
separ to end of snow
sheet towards ice dome
into crevassed blue ice.

Struck eastward away from
the dip of lateral crevassing
Mountain is accessible at Pt.
end of wind snow, leads

to white (shes & veins).

N. E. of Mt. Henderson summit,
from summit as viewed from
N. is $\approx$ E. 2 faults or shears
str. 40° N. d. $\approx 70^\circ$ ~~N~~ S. E.

E + N. to smooth (snow
from ice dome N of Henderson)
then down hill is smooth snow
to west & turned south
on that ice w. narrow crevasses
to enter the Great Gorge of Mt.
Henderson.

Pt. 3 is approx position of
bluff of whitish rocks.

Bright red stains on granite may
be hematite or limonite.

Core mainly granite w. some whitish lenses.

Pt. 4 Lunch place on melt stream

Has a thick band of poorly
foliated feldspar-quartz-garnet
pyroxene gneiss in the granite.

Band is mainly rubble, app.
str. 30° M, dip unknown, prob steep.

The granite at pt. A is a friable
feldspar-quartz-hypsthene rock.

Large elongated ~~fe~~ dk-brown to
brown red feldspar xls $\Rightarrow$ 80mm.

in a matrix of feldsp. qtz.
& hypsthene, med. gr., equil gran.

Qtz. tends to clump together & may
be abund = feldsp. Hypsthene smallest,

poss. a w. v. small garnets or
hematite. Granite is mainly

massive w. a possible vague
orient of long feldsp. in $\pm 60^\circ$ M.

Granite contains ~~large~~ ~~in~~ bodies

1' $\Rightarrow$ 100', of ~~Feldspar-garnet~~
Quartz-feldspar-garnet-pyroxene

gneiss. Coarse-grained members
form large bodies & are poorly to
well-foliated. F.g. members

are massive or v. well foliated
w. marked linear growth of

quartz (pebble only)

Typically, lt. grey rock, cr.
grained w. feldsp. $\rightarrow$ 50 mm.
elongated // vague texture.

Elongated clumps of blue m.g.
qtz xth. also // folia. + matrix
is ~~to~~ f.g. to m.g. garnets
in clumps or dispersed &
small amt. dk. min. (? pyroxene,
biotite?) as small xth. as w.
garnets.

SAMPLE 2. 11372 (p. 1 metamorphic
pyroxene)

8048V, Run 306

P+4 - lunch place a ab.

view of Mt Anderson from east

3 5 5a shows white patches vis. on photo
6 7 8 7049L - Pts 3, 5, 5a, 6, 7, 8.

S. end Fischer Mine at
at corran. Thin $\frac{1}{2}$ " - 2" branching
& anastomosing black vein

of quartz or quartz-magnetite (mylonite)
str. 120° dip 50° S.W.

Country is yellow brown sh. cr.
grained charnockitic granite w.
elongate feldsp. trend 35° dip vert.

A poorly foliated granite, med
gr. matrix of qtz, feldsp., hypersth.
shows no trend, only pheno., as abv.

Are small patches. quite massive
granite but great bulk of outcrop S.
of cororan has feldsp. ~~trend~~ ^{elongated} 30°

One feldsp. xlb. mass $30\text{cm} \times 10\text{cm}$.

Are also pyroxene rich lenses
- equal pts. feldsp., pyroxene, quartz
f.g. to m.g. ~~is~~ concordant
w. feldsp. xlb. in 30° . Are a
few feldsp. pheno. in these lenses ($3' \times 6''$)
poss. corroded. Lenses may be
xenoliths or segregations, have
vague, gradational, ghost boundaries.

Thin qtz. magnetite vns. seen
w. concordant str., dip 50° N.E.

Also small lenses of vuggy
blue quartz, apparently late stage
concord w. trend of feldsp. xlb. 1
C.

? is this a metamorphosed granite?
a deformed granite w. feldsp. x 50
enlarged in metamorphism.

Large Feldsp. xths. may be white
to creamy yellow, but red-
brown is most common.

Track Note. Good Along W. side
Henderson mainly blue ice
w. some crassing - no obstacle -
finishing on snow w. reasonable
sastrugi along approach to
Fischer Nunatak.

Botanical Note. Common lichen
is dk. grey to black. Bright
yellow, bright red, & sea green
vars. also.

False Fischer Nunatak is
cr. g. porphyritic charnockitic
granite w. feldspar phenocr. dom.

SAMPLE
3

11375

(p. 2)

elongated in $30^{\circ} - 40^{\circ}$ M.

Black qtz - magnetite. vrs. sh. out
thin branching, lensing out.

A few small bldrs. qtz-feldsp.
garnet rock app. enatic, no
garnet in situ. Some of

the f common small lenses
of f.g. to m.g. qtz-feldsp.

- pyroxene material, no foliation

no large feldsp. xls or v. fine,
some as dyke-like lenses

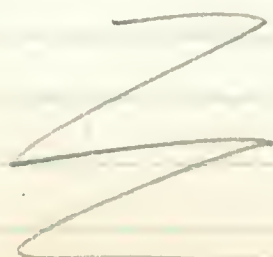
all follow elongation of feldsp. pheno.

Sample 4 qtz-feldsp. - pyrox. rock,
equigran. w. few feldsp. pheno.

from an oriented inclusion, $4" \times 6"$
str. 30° M dip vert. in porphyrocratic
granite close S. of Fisher Nor. canyon.

This appears to be the original
rock in which the feldsp. pheno.
grew. A cement inclusion.

2 ? disrupted
dolomite



Wed. 8 March, 1961.

Bluff close N. Rum Doodle¹
is a med. grained ch'kritic
granite w. grey feldspar.

Large large brownish feldsp.
at top, app just graining
Numerous relict lenses + bands
of f.g. granitic gneisses,
w. vague foliation

Enveloping m.g. granite

~~is also massive~~ massive,
some feldsp. concordant w.
ch'k, most not. It is
is quite massive.

Relics str. 160° N, dip W 40°

Hornblende & magnetite veins, common
f.g., concordant & discordant.

Bluff about steep ice slope
in R. D. some is coarse
grained lt. blue-grey —

qtz. - feldsp. - biotite rock Blue
Chlor. of shadow qtz. > 50 cm
Feldsp. white, small sharp black
spots - 1/4 in. Pearly fragments
- 10 rough square folien. of best
ch. for rel. Relics apb. in
reaction w. pegmatitic matrix
- c. rounded lenses w. sharp boundaries
→ 20' long str. 160' d. 35° W.
One is a garnet - ? pyroxene rock
other are pyroxene rich prob
w. alk. qtz, feldsp. Blue qtz.
aggregations give folien. to pegmat.
matrix. Some also are very light
like Sample 5

Secondary mineral, being foliated
along fol. line is apb. after
qtz. & feldsp. lenses. Displacement
w. pyroxene. Sample 5a

50 yds N. Bluff has the same
pegmatite both from qtz. matrix
w. various possibly foliated
gneisses & granulite bands.
The matrix rock is a qtz-
feldsp. biot. paragneiss, m. qtz.

V. uniform. Pegmatite
one has pink feldsp. trace.
others have blue qtz. & white
feldsp. both intratextured & by
permeate country rocks.

First green calc. sh. seen.
Trace plastic secondary fault
in granite. Pink feldspathic

Sample 6 - very large white feldsp.
in granite & mica.

6 Typical pegmatite. No rock
seen at all. Samples of both kinds.

30 yds N. on S. side snow
drift is pegmatite in
white m. q. equigr. & 2
folded & muscovite, & w large
clusters m. q. to cg. lt. green
to purple coloured substance.

These are of mineral
resistant to weathering. Some are
surrounding sample 7

Above all Photo 70562 Run 304

Pt 9 R 11376, 11377, 11378 2 mable
(p.10) (p.11) (p.12)

Thurs 9 May 1961

N. Masson Range south
west of R.D. road to be
all granite.

Middle Masson may be
different, but N. Masson is
it, & 2 east summit is 4740
feet above a road in the
vicinity.

S. Masson Range - 9065R, Run 300

Pt. 10 - top of mountain summit
is 9065 ft. Red & brown

well & finely foliated gneiss.

quartzite, with some

of coarse grained gneiss.

quartzite. Contact is clear

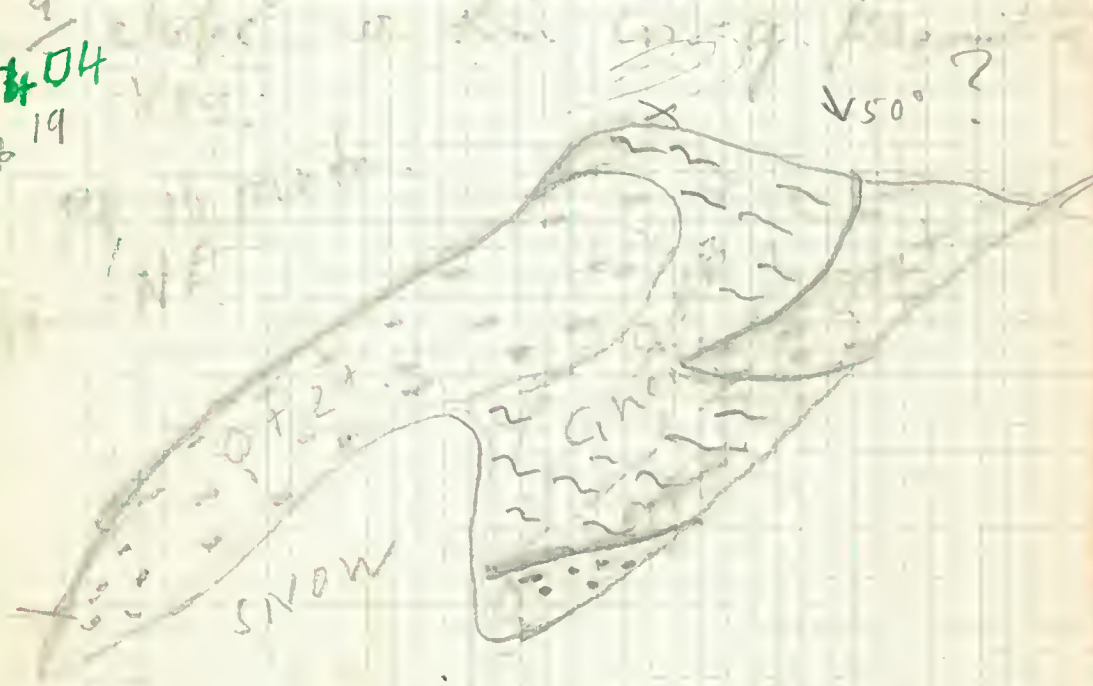
common in the area. These foliated

quartzite is probably derived from
a Recumbent rock.

SAMPLE
8
R11380
p19

4 plange but to...
 strike of...
 dip. Str. elem. 60° dip
 100° S.E. but at summit
 100° S. 100° + dip 20°
 400 S. (Approx. to
 be a plateau feature)

S. side of the mountain
 white f.g. to m.g. massive
 SAMPLE 9
 11704
 19



Fold plunges to 100° ±
 S. side of S. Mountain geo. as sample

for Pt. 11 a med.-gr. poorly
 foliated to massive norm-
 popyritic charnockitic granite. Sample
 about hypsion & thin fol. 10
11405 p. 20
9076 R

Pt. 12 Monotake S. of S. Mason
 Med. gr. poorly foliated
 ch. granite w. abundant dark
 mineral. Foliation is broken up
 by cross-bedding & bands of
 coarse grained gneiss. norm-
 popyritic ch. granite, ~~sp. 4 ly~~
 bands of biotite-rich gneiss
 material furnished by 1 g. to 120
 m. 11406
 popyritic granite. Sample
11

Track Notes from above Monotake
 to Pt. 12.
 1/4 m. Bubbly ice
 1/4 m. crevassed bubbly ice Pt. 11
 1/4 m. Sastuigi to ice at S. Mason Rd.
 Bubbly ice w. rare crevasses to Et to rd.
 Sastuigi to south of Monotake 2
 then ^{south} crevassed ice, not bubbly ice to R.D. 2

Fri. 10 March, 1961

24

Small ^{S'} clay-rich mudstone
w. af. red. claystone, red
is bedded well, about 14"
gray to dk. gray, greenish
boss. calc. - silicate rocks or
str. feldsp. dk min. in brown
etch on weathering, red mudstone
beds change w. depth sh. 50
up 350 - 500 SE. Are interbedded
w. lt. gray to white crs. gravel
& porphyritic regimatic sandstone
some w. feldsp. - quartz
d w. red brown non-porphyritic
hard. gr ch. are present
a little red-brown Q, FB, quartz
Many rocks may be pyroclastic or
calc. sil. greenish.

SAMPLE 12.

PT. R 9061 R, Run 306

11407

p. 18

PT.
13

White amygulation on rocks at Pt. 13.
resemble efflorescent Sulphur + SAMPLE 12
of dark gneiss may contain GALENA.

8063V, Run 306. ^(to form as usual)

Pt 14 Mainly foliated gneiss.
granite, w. prob hypsthene dk. min.
red g. min. red brown w. some
f. foliation. a large
some lower blue etc. foliated
On non porph. qtz foliated. frequent
dark pyroxene rich with lower
concord w. folia. - Str. 90 dip 45° E.

Inclusion
SAMPLE
T3

11408

P. 13

biotite. Qtz. folia
biotite gneiss f. m. g. to f. g.
well foliated, form along of the
inclusions. One in SAMPLE
has abundant pyrite as small xls.

s. and m. d. masson is all
partly foliated - massive - porph.
chloritic. granite w. white bands
on one peak.

Blair, N. 17

Nuratak: Blair, N. 17
cr. gnd. bnf. chromocrite

11489
SAMPLE
14

9060R of v.f. g. black thin (7 1/2) qtz.
magnetite ins. Relics are more
ghost, less app. with host rock
composition & not all are oriented
form. Foliation is very
poor, elongation of plagioclase
|| by qtz-mag. v. str. 30° v. str.
but rock is mostly massive.

8063 V & 9060R, Run 306.

PH
15
16
+
17

All east side of Inlet Mason
is cr. g. brown to red brown bnf.
ch'kite granite, massive or poorly
foliated w. elongate feldspar.

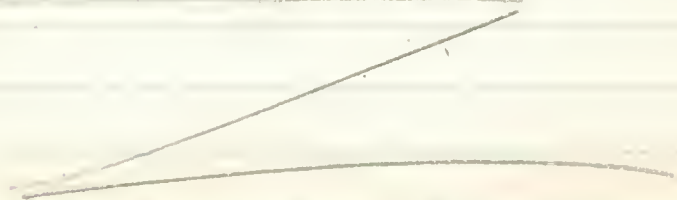
9063 R, Pt 19. Approx. postn.

thick white bands in ? granite near
summit of Mtn.

Track Notes.

Run Doodle S. along W side
of NW Mason & Mid Mason - Ra.
H Sawtooth Nuratak, all
on lumpy ice with short

crevasses at S.W. end of N. Mason Ra.
Then on crevassed ice w. thin snow
cover to S. end Mid-Mason Range
N. along E. side Mid-Mason
on moderate sastrugi, max 18"
down smooth snow slope at N. end
Mid Mason Ra S. of from Nunatak,
to ~~small~~ bubbly ^{to blue} ice plain E
of N. Mason Ra. Then N. along
the E. side of N. Mason Ra on
bubbly ice fell by low sastrugi
to ice dome near N. end of
N. Mason Ra. Crevasses under
thin snow cover N. & East of
here, proceeding to West forced return
round S. end of N. Mason Ra. to N. P.
Lake proved track suitable. See Track
from Kun Dooelle round N. end
of mountain up crevassed slope
east of above ice dome.



Saturday 11 March, 1981

28
8

2 peaks at N. side of
Hooden Gap have coarse
banding dips northwest.

9068 V - Run 304

Pt. 19. is camp. Mt. Hooden west side

well foliated yellow-brown
coarse-grained porphyritic clinoclitic
granite foltr str. $40^{\circ}/70^{\circ}$ S.E.
Feldspar elongated in foltr direction,
large & small yth. & hypocl.
xth. or concentrated in lenses
11 foltr. Relic lens is a folio-pyroxene
with red-gr. equigran., well
foliated, $3' \times 8''$

A pegmatite phase of the granite
has prisms yth. $\Rightarrow 30$ mm. +
feldspar in the matrix quartz > 50 mm.
Pegmatite phase is irregular abt 6" to 1'
discord & covered.

On ridge N. of Pt. foltr.
str. 20° , var. Foliation is

Commonly absent in m.g.
equigranular granite, (it may at
best be haphazard). ~~Pepe~~
Good foliation str. 40° d 80° SE
1" branching black v. f.g. qtz-
magnetite ~~var.~~ foliation
when foliation well developed, granite
is gneiss, lenses qtz & feldspar^{m.g.},
w. partial envelopes f.g. pyroxene
- even in med. gr. phase.

Granite passes imperceptibly into a
well-foliated med. gr. qtz-feldsp.-pyrox
gneiss. Biotite rich inclusions
occur in granite & granite develops
biotite near inclusion margin.

Slightly ~~the~~ biotite rich
feldspar phase of the orthogneiss
which well foliated, as here,
becomes an augen gneiss w.
feldspar augen.

W. flank low-level gneiss
is co. gr. well foliated, prob. orthogneiss
granite foliation str. 40°/70° SE.

2" black qtz-magnetite var. in
cr. granite. SAMPLE 15 11410, 25

Felsic bands in pyroxene gneiss
 form recumbent folds w. axial
 plane foliation. - Boulders in matrix.

Pt.

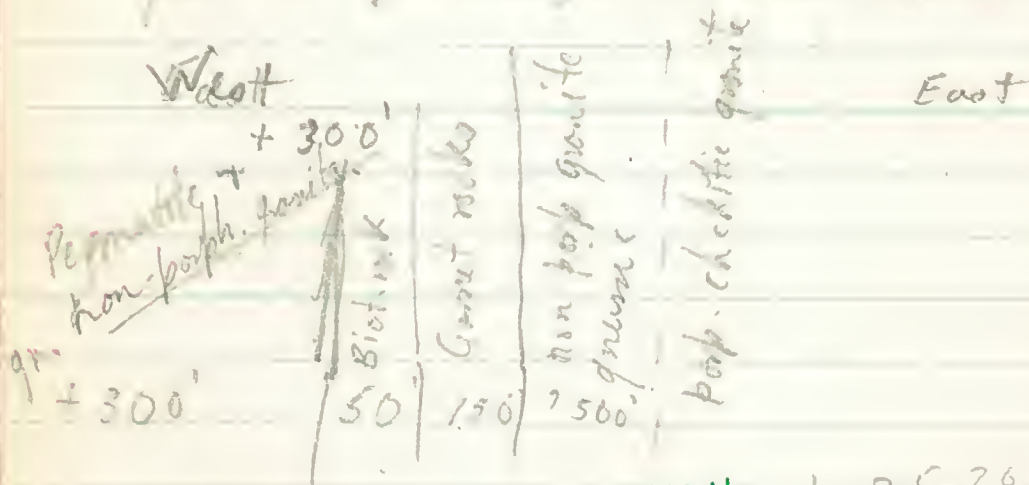
20

Knob forms T.S.W. corner Haden
 main mass is qtz. - feldsp. - biotite
 - garnet gneiss, w. thin v. well
 foliated. biot. - qtz. - feldsp. gneiss
 + qtz. - feldsp. - garnet granites.

Also coarse grained massive
 to foliated red-brown th granite
 (1' biotite) pegmatite + non-porph.
 ch'ckitic granite.

Biotite rich rocks are dk. grey

to black, garnet-bearing rocks are
lt. pinkish red. All concord w.
granite foltn., str. 40° dip $70-80$ S.E.



SAMPLE 16

11411
11412

p. 25, 26

above rocks may cont. to S.

Garnet gneiss has large rounded qtz. & feldspar. Feldspar is pink in the g. f. g. gneiss & granulite. Some Pegmatites have 10 mm. biotite & feldspar.

Track Notes.

Good bubbly ice up Mas-Dar corridor S. from R.D. Keeping to right, turn in towards Dura Ra. into road. CW

& cont'd. on snow to Hordern
gap, sastrugi range up to 2'. ∞
2

Too far south on E. side
Hordern Gap led into crevassed
blue ice w. thin snow cover.

Best track remains on rough
sastrugi → 2' part bamboo
poles through gap to ice w.
few thin crevasses. S. in
bubbly ice to Mt. Hordern
where ice steep & slippery
against mountain. Camped W. side
on moraine.

Sunday 12th March, 1961
8065V, Run 304, Pts. 21, 21a

Naratak in Gap N. of Mt. Hordern.
S.W. end is m.g.
yellow-brown gneissic charnockitic
granite w. garnet, abundant, associated
w. pyroxene. Feldspar phenocrysts
rare. N.E. woods the passes into

a. Q. F. Gneiss w. ? pyroxene
common. Rock is dom. Q. F. w. m. g.,
stringers f. g. garnet, providing
foliation, a white rock

b. 24

Pink-feldspar pink pegmatite w. 17
garnet occur in both granite & garnet

- gneiss above. Higher large N.E. 11414

Knob of maratak is lt. yellow
brown, crs. g., porphyritic & gneissic
characteristic granite w. biotite - 19
rich "relict" inclusions, concordant 11415

lens-shaped, & qtz magnetite vns

Gneiss is common to rare, poss.
associated w. pink, ghostly stringers
& veins of aplitic f. g. qtz -
fels p. material Pegmatite.

Veins, irregular, are common - a
yellow brown phase of the granite.

SAMPLES

N.B. Gneiss persist to N.E. bluff
in well foliated granite.

Dom. folia the out str. 40°/70°-80°

S.E.

80615
Pt. 22
11

Census West of S. and David
Ra. at Gap. str. 60°/50° SE.

3
4

Track runs well out west
of Horden Camp.

8/11 East side David Ra. N side Horden
Camp. Lt. yellow-brown cr.

gr. equigranular biotite-bearing
characteristic granite ~~is~~ small sample
inclusions w. biotite a w.

pyroxene. Clumps of pyroxene
w. small biotite appear to
follow a foliation, but is
no straight trail. Granite
is foliated but trend not apparent.

20

Track Notes

Left Horden Camp, behind lateral
moraine on West side main peak.

Return to Gap Muratak on bubbly
ice w. few crevasses, projected
route to West David, bad beside Range

best route is out due W. from Gap.

There are two flags in the
Koonen Gap, which is N. of the
small meadow. The route N. from Gap
Koonen follows a direct line ^{from Flag at} ~~past~~ flag
S. end David to Burn Doodle & ^{2nd}
runs quite high along the E. flank
of David in ~~very~~ rough scrubby, ^{which}
up to 2' prob. av. betw. 1' + 1½' } ^{starts}
2-3 miles. The route passes into
blue ice which is crevassed
badly in low ~~the~~ broad dome in
center of the corridor. ~~Best route~~ it
passes south of this to ^{thin} ~~good~~ snow
& bubbly ice which continues
past a flag ^{at} & some debris, w.
^{vehicle} ~~tail~~ direct to Burn Doodle.

2 (Flags) in Gap, aligned E-W.

1 Flag at S.E. corner David Ra.

1 Flag on ~~bubbly~~ ice? ~~then~~ ^{thin} snow
? 4 mi. south of Burn Doodle.

& 1 Flag ½ mi. N. of S.E. corner
of David Ra.

Vehicle tails the west scarp.

Set. 1 m. + 2 m. N of SE
corner of Bird Ra, & 1/2 vehicle
tracks in the snow N of covered
low dome 3 m. to 4 m. S. of R.D.

39

13th March, 1961.

Run Doodle to Mawson
Track Note.

Followed along margin line
in small valley to top sticks
& down 13'. Peaks appear in
N. Mawson deep valley gap,
then broad Mawson & run by
various flags & domes, keeping
Mt. Hudson above, to melt
lake & snow slope below &
some distance N of Henderson. There
at 45° across several melt
streams to bottom. Fast along
crest to slope due S. Mawson with
slow descent on ice & snow
not melt pool at dry lines.

On Monday, 27th March, 1960.

Tom, Trail, & Seavers, arrived
at R. P. & Trail prepared
for a man-hauling journey
to establish a small geological
depot at Trail Pt. at the
N.E. end of the South Masson
Ra.

Tuesday 28th March, 1960.

1100 Trail & Seavers left hauling
an 11' man-hauling sledge w. light
camping gear & emergency food
for + 14 days. Progress was very
good over blue ice, both wore
well-fitting crampons with mukluks
& the first considerable halt, for
lunch, was made at 1300 about
1 m. S. of the S.W. corner of
the North Masson Range. A moderate
S. wind was blowing but sky
was completely clear. After
lunch break Trail attempted to
rise from an empty Kitbag on

The ice & was attacked by
~~several~~ cramps in the left thigh
inside. Scores massaged the
affected muscle but on attempting
to rise the attack was renewed.

∞
∞

The whole attack lasted about
15 mins. & culminated in slight
cramp some muscle right thigh, Trail.

They carried on, crossing
crevasses up to abt. 8' wide
when approaching & abreast
Sawtooth Mountain, distant 1 m.
These were well bridged w. nevee
& ice but some had rotten margins

They then reached snow
w. low sastrugi → 1 foot &
pulling become very much
harder, speed was very much
reduced. After about 2-3 m
snow they reached the

edge of the wind scour
at Trout Peak, & descended
eastward to get access to the
mountain. On the descent the
sledge overturned by sidestepping
from ice on to snow. East
righted & both thrusters followed
sledge to bottom of wind scour.

To mark the depot Trail intended
to camp at the foot of the S.W.
chuffs of Trout Ph. Snow
here lay rather thinly on
the blue ice & was very
hard. The sledge was first
unloaded then Trail discovered
that the aluminium shovel had
on an ice axe made v. little
impression in the snow. Both
were very tired & w. cloudless
sky & v. little wind they
decided to camp there at 1700
since no other spot was evident
close to. About half the tent was
satisfactorily embedded in snow
& the other half tied to boulders

They both turned in at 2200.

The wind rose steadily throughout the night.

40

Wednesday 29th March, 1961.

The tent stood up well to hard squalls from Frost Peak striking end & side. When trail rose at 0800 the windward tent end tilted & he hoisted outside. The canvas sheet covering the ridge pole was ripped from the tent at both ends & was evidently under great strain.

A few guys of ~~the~~ manilla cord had chafed through & one end peg had been pulled out. On S. corner, rising from the windward corner the tent collapsed. Drift & snow were ^{mod.} thick, visibility about 200 yds. max. closing to

50 yds. squalls were sufficient to knock a man down.

At Scores suggestion the sledge was loaded to boulders 1 wind + the ridge of the tent lashed to the lower rungs of the sledge.

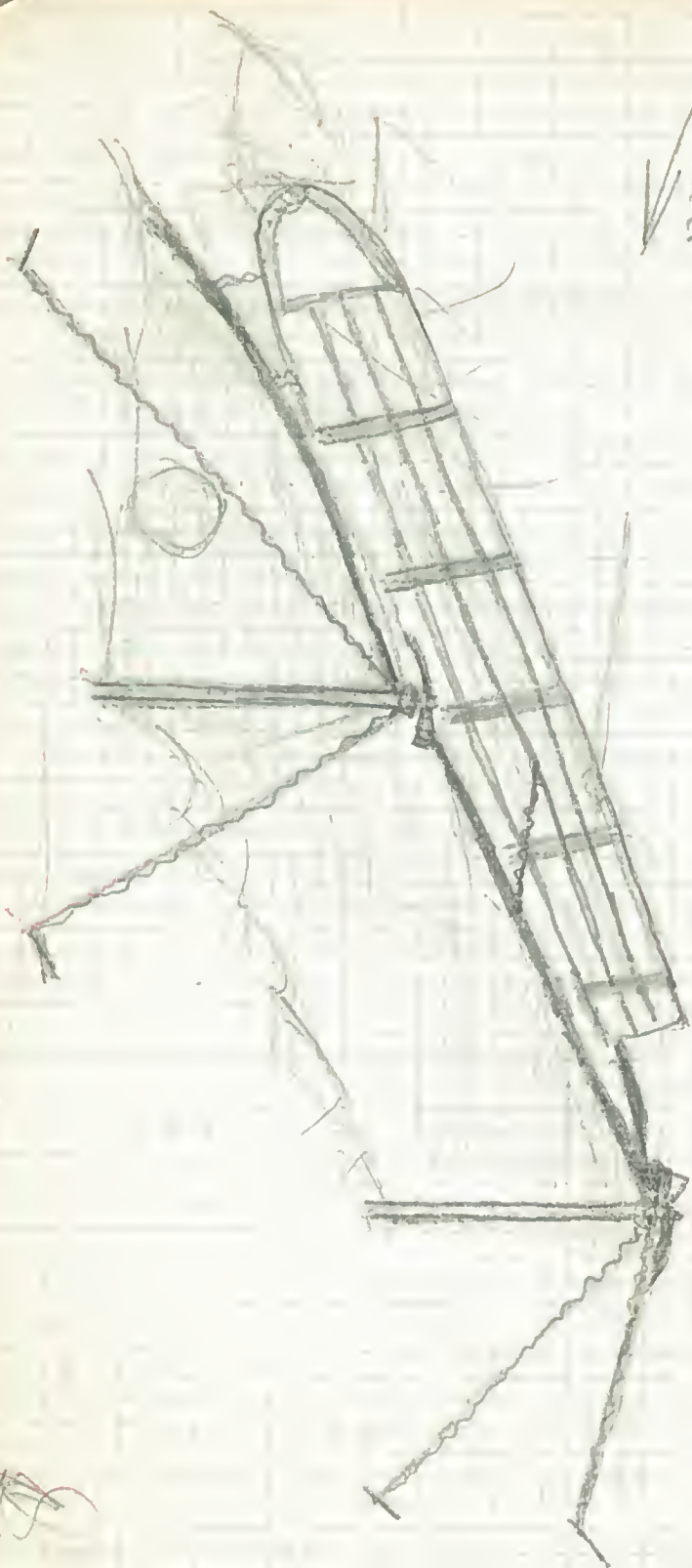
An ice axe at each corner of the floor on top, gave about 2' headroom when leeward end.

~~At 12~~ Tent poles were broken + bent when the tent first collapsed.

~~At 1230~~ Scores. Following a quick + useless search for more sheltered ground, Scores + Trail entered the bivouac at 1230 + prepared a meal of HF-6 + dried vegetables.

High wind & drift continued to ~~easing~~ nightfall when guys were inspected. At 0100 the wind had again increased & squalls of explosive force battered the tent making sleep fitful & almost impossible. At about 0100 the guy holding the ice axe at

Wind



Trail's end broke & flapping & banging of the canvas became impossible. considerable quantities of drift penetrated the floor hole - the tent was a Beche - . Trail went out to secure the ice axe & to tie the entire tent & sledge to the boulders with $\frac{3}{4}$ diameter rope to ~~now~~ then sledge tow rope & monilla cord had held the bivouac together. To emerge from the tent Trail crawled over Sevens & emerged through the door at ground level & in so doing he must have accidentally dropped Sevens' mukluks through the door & these were immediately whisked off, unseen & unsuspected in the darkness. Having secured the tent Trail returned. ~~At about~~

Thursday, 30th March, 1961

At 0700 they awoke & breakfasted w. difficulty. Sevens then discovered his mukluks missing & Trail searched about 200 yds

downwind w/out result. Explorin
squally + drift continued.

44

In the afternoon they read
aloud for a short while, then
the evening meal, guy inspection
took them to nightfall. Clothes
& sleeping bags were fast becoming
soaking wet + froze by the
drift entering the tent, + late
frozen food, heavy + difficult
to manipulate.

Friday 31st March, 1961

The wind dropped from abt
0300h. onwards + they began
to prepare breakfast at 0600

At 1030 they left w. the sledge
& all belongings except
2 plastic cups
1 2 pt billy

+ Seares mukluks.

Seares wore crampons over 4 pr. socks
+ 2 pr. duffel inners. Abt.

1 m. from camp 1 mukluk
was found in thin new snow.

Seares proceeded w. 1 mukluk to
crampon + 1 inner w/out crampon,
v. difficult on blue ice, +
he walked over 8 m. in this fashion.

The sky looked ominous
S. of the S. Masson Range +
definition was poor for about 5 m.
progress N'ward w. light to
moderate drift, abt. 15' high.

On blue ice downwind Trail
led + Seares followed the Sledge
Trail pulling + Seares steering.
on the many patches of
new snow w. low (1') sledge
Trail pulled + Seares pushed.

Weather improved rapidly from obscuring
the S.W. pt. N. Masson Ra.

+ they reached R.D. at 1430
where Tod emerged + pulled the
sledge he lost $\frac{1}{2}$ m.

Morals.

46

Always take a shovel.

Always camp in deep & rel.
soft snow.

Never expect good weather.

— Monksaulig, 2 men on snow
is exhausting & leads to
carelessness.

Lost

1 pair goggles.

1 mukluk

1 Billy, 2 pt.

2 mugs, plastic

Damaged

Beche Tent, brand new
ripped along ridge pole sleeve
& several small holes in man

fabric, easily repairable.

3, out of 4, A-poles broken.

1 crampon, size 45, new,
broke during return trip, apparently
poor metal.

Lilo mattress, 2 small holes.

Observations :-

Alum. shovel useless

Ventile suit too tight

" " zips too fine, light

Sunday 2nd April, 1961

306/
9057R

Continuation N. from R.D. traverse
of 8 March.

Pt.
24

Bluff from Gull N of R.D.
is predominantly m.g. granitic gneiss
w. few feldsp. phos. Abundant
well foliated inclusions or veins
dom. of pyroxene-feldsp. gneiss
fg. to m.g. also some biotite-
feldsp. inclusion & are both
weathered garnetiferous rock
while main complex is well
foliated & apparently soaked
by the ch'kin granite magma.
trace quartz gneiss. Irreg. lens
blue qtz. - feldsp. pegmatite are
common.

Superficial block Mn staining
& small pyrite sp. at one
exposure.

N. across next gully to Painted
Pk. half which I pass. dom.
gneiss & miss w. abundant thick
layers & lenses of qtz. biot. -
fclsp. gneiss, black, m.g., well
foliated. Also qtz-fclsp. -
garnet. gneiss & prob. garnetiferous
granite gneiss are common in
the layered succession.

Trng. lenses v. c. pegmatite, black
qtz. & fclsp. rock, rare also.

Gneiss gneiss are well-fol.
v. varied, m.g. to c.g., yellowish
lt. brown.

px. 25
25 N. end Pk. of Painted Hill
N. Masson is ~~typical~~ granite
gneiss, gneissic granite & m.g.
brown-grey & massive med.
gr. yellow brown to yellow
white characteristic of m.b.
w. few large fclsp. phen. There
is however (a med. gr. porph
granite which is not the typical
c.g. porph. - ch. thin veins
in the above smaller bodies

306 ~~Tues~~ Monday 3rd April 1961.

9057R

50

Slope behind Rum Doodle is
pr. rubble of porphyritic & non-porphyritic
foliated chomochitic granite, mainly
26 med. gr. variety. Bedrocks are well
foliated and contain many
bands & layers of dark biotite-
gneiss

Gully boundaries in between
pegmatite / gneiss / granite
N. of R.D. may be shear
zone or at least indications
of post-metamorphic deformation

Thursday 13th April

306
9057R

W. foot of Painted Hill
at gully is Qtz. Feldspar
Gneiss biotite gneiss
A dark bluish grey rock

pr.
27

f.g. - to m.g. well foliated.
Foliation due to elongate lenses
of bands of yellowish white

g.-F. material, elongate lenses
of dk. blue qtz. & stringers
of small garnet xls. all in

a f.g. foliated matrix w. abundant
biotite w. g. F. & G., all f.g. SAMPLE
Str. 1600 M, dip 45° w 21

Stringers coarse & thin bands coarse
+ thin discord veins, qtz feldsp
aplitic, throughout 1141014

The first (lowest) red band
is abt 50' thick str 1600 incl 55° w

The red is hematite (also
green in thin in porphyry
in massive). The band is
G.F. Biot Garnet gneiss w.
possibly pyroxene & perhaps
sulphide, pyrite, common or
massive pyrite or pyrope.
Well foliated. white biotite &
garnet stringers abundant the
rock is interbedded w. about
1/2" to 3" layers of bands
of blue black porphyry.

qtz, etc. gr. w. pyromet
hor. to wh. weathering
blood red w. in part of
hematite. Fresh rocks
of little different but
boundary of red band
& white grey. G.F. G. grain
of country is sh. l.

5
2

p. 4

11417

SAMPLE

22

p. 5

11418

SAMPLE

23

+100' lt. grey massive to
poorly foliated qtz. rock
w. joint steeper than
foliation, qtz. w. pyromet.
Sample

20' Red band, hematite
pyromet grain in thick
bl. qtz. steeper than Cu
stain, grain. Sample

Pyromet Q.F. G. grain
lt. grey m. g. w. thin
sh. hematite description

p. 5

3" mainly dark, contain 11420
large garnet 26 (1/2"). Also SAMPLE
hard, black, green rock, 24A
with splinter. 11419
SAMPLE 24

5' dark grey, purple. St. 140°
dip 25° W. plastic deformation.
10' layer 11421
SAMPLE 25

grey, dark, black, brown, red, yellow
3' 15" in. Sandstone
plastic deformation. St. 140° dip 25° W.

grey, brown, red, yellow, black, white
red brown, weathered, Q. F. B.
grey, dark, green, brown, black, white
dark & light brown & white
purple, pinkish, red, S. K. E
with thin, yellow, purple, brown, white
red, yellow, black, white

banded by varying amounts, mineral
but bands poorly foliated. 11422
SAMPLE 26

Px // Summit of Contact Hill, 1st
 28 N. of R.D. 6 poorly foliated
 28 // lt. brown-yellow Q.F.G. gneiss
 Str. 0° , dip 70° W. w. larger
 Folds etc.

SAMPLE

27
 114-23
 p. 8

Painted Hill

MAP
 ↑ N.T.

Face A

Q.F.B.

PK

Contact

Q.F.G. Gneiss

Granitic Gneiss

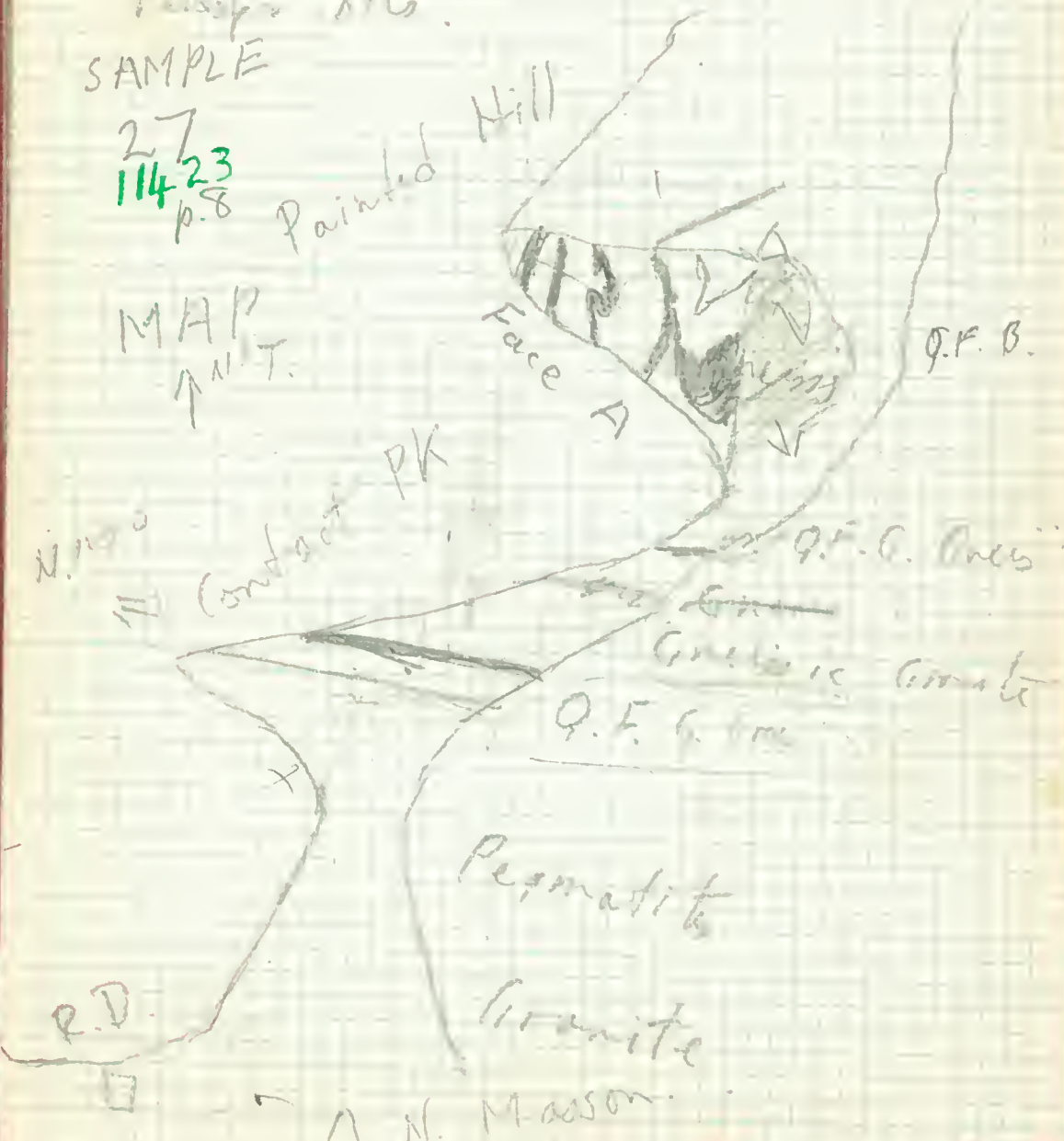
Q.F.G. Gneiss

Permatite

Granite

R.D.

N. Mason



Face A

From South

white Q.F.G. gneiss

Dk red, fer. Q.F. B. gneiss



Dk. red bands (Q.F. B. gneiss)
on Painted Hill
From Contact Peak

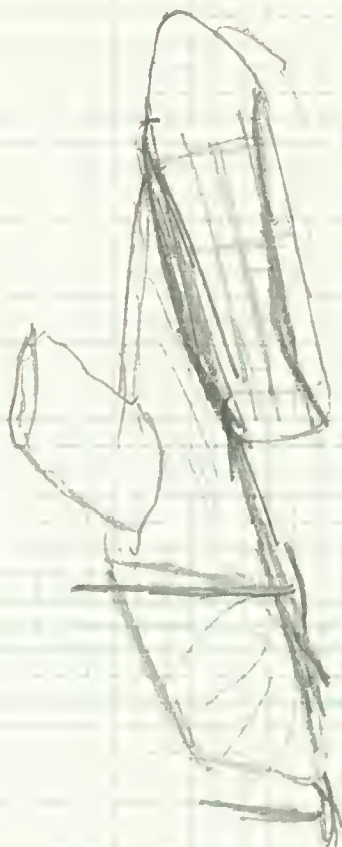
Greenish white of contact
Hill, in ss., lower biot.
rich greenish interb. contact
zone & greenish quartz
at contact. 541122.0.

56

in str. 0.5 m, dip 20° W
p.d. in foliation of p.d. p.10
11424 SAMPLE 28 11425 SAMPLE 29

Efflorescent white & yellow
encrustation locally common
on Face A, Painted Hill,
don. assoc. ferrug. biot. gneisses
Some Ca. staining in blue-quartz
pegmatites
Some "biotite" may be weathered
sulphide - malachite left.

7



TRAIL

WYAAD YAEWF GUTHEGA
 ZEADT WYVZO WYSSA WYVUB
 VIV

VON RENOURD

YI OPI MARGI YAORM
 WYWOB WYUHM & WAITING
 THAKA RECEIVED MALSON
 VIEWS BUKTAN YAHARS YOU
 HELPED RESCUE RUSSIANS
 THAKA HAS CREWENT ALSO
~~ONE~~ ERIC WINTERFLAY 2
 MONTHS LATER FOR THE
 YHADT WYSSA
 IVY MARGI

A . . -
B - . . .
C - . . .
D - . . .
E . . .
F
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Ø

FM STYLES
TO WELER

RE DR RADO KS ~~is~~ ~~is~~ ~~is~~
temperature measuring
equipment in the hold of
Halo. Does or what is in
the capillary capillary
does the engine room
temperature affect it or
is the reading independent
of it. Did rado leave
any ~~instructions~~ ^{instructions} if so
where are they?

Chief engineer is familiar with
position and setting up of
equipment

No effect by engine temp
as far as is known

No written instructions but
operation very simple

① Wind up ~~the~~ recorder and
put in new paper every

62

second day.

- ② Check that alt. is well each day - & note sea temp given by ^{permanently} mercury thermometer installed in the engine room.
- ③ Note ship's noon position and write it up record together with date and sea temperature from mercury thermometer.

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